

VIRGINIA CONSERVATION LANDS NEEDS ASSESSMENT CULTURAL ASSET MODEL

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INTRODUCTION

The Virginia Department of Historic Resources' (DHR) mission is to put Virginia's history to work through the identification, recognition, and preservation of the Commonwealth's significant historic, architectural, archaeological, and cultural resources for the use and enjoyment of our citizens and communities (see www.dhr.virginia.gov). DHR works to evaluate the significance of historic resources and list them on the Virginia Historic Landmarks Register and the National Register of Historic Places. Key stakeholders in the appreciation, preservation, and use of Virginia's historic resources include: federal, state and local agencies; local community leaders; property owners; developers; Native Americans; students and teachers; museums; researchers, scholars, and consultants; archaeologists; tourists and businesses that rely on tourism; and the citizens who live, play, and work in historic buildings and communities made more livable by the quality, scale, and character of historic buildings and districts. The Virginia Department of Conservation and Recreation Division of Natural Heritage (DNH) collaborated with the Department of Historic Resources in the development of the Cultural Asset Model. The model is one component of the Virginia Conservation Lands Needs Assessment (VCLNA). The goal of the VCLNA is to help prioritize conservation efforts through the modeling and mapping of important resource information such as ecological cores, cultural resources, growth prediction, forest economics, recreation assets, lands that promote water quality and watershed integrity and important agricultural lands (see <http://www.dcr.virginia.gov/dnh/vclna.htm>). The objective of the Cultural Asset Model is to show the cultural value of lands in Virginia.

METHODS

DHR's GIS datasets represent historic architectural resources (including resources such as cemeteries, bridges and historic districts) and archaeological sites. They include attributes such as resource name, eligibility status for listing on the Virginia Landmarks and National Register of Historic Places and whether that resource has been placed on the registers, to name a few.



Figure 1. The Homestead Dairy Barns Historic District in Bath County & GIS polygon delineation of the Homestead Dairy Barns.



Figure 2. Example of an archaeological entity, represented in GIS and actual entity in picture.

In addition to the historic resource data, American Indian Areas from the U. S. Census Bureau are used in the model. The U.S. Census Bureau defines these areas as:

"...the legal federally recognized American Indian reservations, off-reservation trust land, tribal subdivisions, Alaska Native Regional Corporations, and Hawaiian home lands. These areas also include the tribal designated statistical areas, Oklahoma tribal statistical areas, and Alaska Native village statistical areas that are defined for federally recognized tribes without a legal land base. The boundaries of federally recognized American Indian and Alaska Native areas are provided by the tribal governments." "The boundaries of state-recognized American Indian reservations and state designated American Indian statistical areas (for state recognized tribes without a reservation) are provided by a state liaison designated by the state's governor."



Figure 3. U.S. Census Bureau Designated American Indian Areas.

Data were cleaned and attributed with a specific weight representing a rank. The ranking system was developed by DHR based on specific entity attribute information. The American Indian Areas, archaeological and architectural data were converted to 30 meter grids and summed to create a final cultural asset grid where value equals total weight. Data were validated for topological integrity using ArcGIS, and the run through a quality assurance protocol with DHR to ensure data were as accurate as represented in the GIS model. Data values range from potential (null / 0) to 20, the data are broken into 5 equal classes. The final data layer is a 30 meter grid (Figures 4, 5, & 6). The data was converted to 30 meter grid to ensure historic resource data protection. The grid was exported to shapefile and geodatabase feature classes for use. Metadata and report were created for the final product, which are freely available to the public.

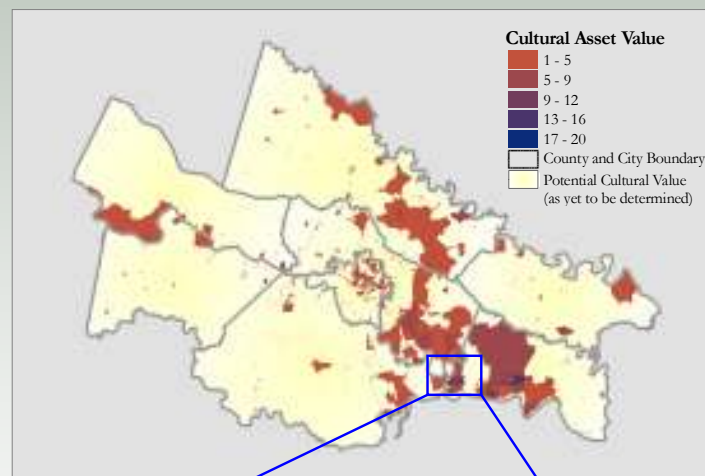


Figure 4. Richmond Regional PDC Cultural Asset Model.



Figure 5. Small scale view of cultural model.

CONCLUSION

Additional Data Incorporation

Development of a statewide model constrains the model to statewide available datasets. In the future, particular areas can be appended to with additional information specific to that area. One particular dataset is Civil War Battlefields where localized datasets may exist and provide valuable information to include in the existing cultural model. These data can be added to the final model grid (see Appendix of the *Virginia Cultural Model* Report) to create a more comprehensive, localized Cultural Asset Model.

Future Application

Null cultural data does not necessarily indicate the absence of data; a null may represent an area that has not been surveyed for cultural entities. Correlation analyses were run on the data to test for significant relationships with which to develop a prediction model. Correlations were too weak to consider and predictive modeling may be addressed in the future using null and positive sites with which to identify important parameters for the prediction modeling.

Viewshed analyses can be run on individual or a few entities. Viewsheds represent areas that surround culturally valuable lands which support the value of such lands through aesthetic and sense of place qualities.



Figure 6. Statewide Cultural Asset Model.

Application of the Cultural Model

Some general categories of uses to which the cultural model can be applied include:

- Targeting – to identify targets for protection activities
- Prioritizing – to provide primary or additional justification for conservation land purchases and other protection activities.
- Local planning – guidance for comprehensive planning and local ordinance and zoning development.
- Assessment – to review proposed projects for potential impacts to archaeological sites, architectural sites or American Indian Lands
- Land Management – to guide property owners and public and private land managers in making land management decisions that enhance cultural values
- Public Education – to inform the citizenry about the cultural value of their community, helping retain the unique sense of place associated with these communities.

References:

Ciminelli, J. 2006. Virginia Conservation Lands Needs Assessment: The Virginia Cultural Asset Model. Report. VA Department of Conservation and Recreation, Division of Natural Heritage. Richmond, VA, USA.
National Park Service. National Register Program. www.cr.nps.gov/nr
Virginia Department of Conservation and Recreation Division of Natural Heritage. www.dcr.virginia.gov/dnh/
Virginia Department of Historic Resources. www.dhr.virginia.gov

Acknowledgements: This study utilized the Chesapeake Bay Program's Resource Lands Assessment Cultural Assessment Model as a template for the Virginia model development. For information on the CBP's RLA, go to <http://www.chesapeakebay.net/rla.htm>